

# Montana Board of Oil and Gas Conservation

## Environmental Assessment

**Proposed Action:** Approve Drilling Permit (Form 22)

**Operator:** Oasis Petroleum North America LLC

**Well Name/Number:** Brewer 2759 14-15 7BX

**Location:** NE NE Section 15 T27N R59E

**County:** Roosevelt, **MT;** **Field (or Wildcat)** Wildcat

### Air Quality

(possible concerns)

Long drilling time: No, 30-40 days drilling time.

Unusually deep drilling (high horsepower rig): Triple derrick drilling rig to drill a single lateral horizontal Three Forks Formation test, 20,461' MD/10,554' TVD.

Possible H2S gas production: Yes, slight H2S possible.

In/near Class I air quality area: No Class I air quality area nearby.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☒ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: Existing pipeline for H2S gas in the area.

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### Water Quality

(possible concerns)

Salt/oil based mud: Yes to oil based invert drilling fluids for intermediate casing hole. Horizontal hole will be drilled with saltwater. Surface casing hole will be drilled with freshwater and freshwater mud system.

High water table: No high water table anticipated.

Surface drainage leads to live water: No, closest drainage is Deer Creek, about 2/5 of a mile to the west and an ephemeral drainage to Deer Creek about 3/10 of a mile to the east from this location.

Water well contamination: No, closest water well is 3/5 of a mile to northwest from this location. The depth of this stockwater well is 77'. This proposed oil well will be drilled with freshwater and freshwater mud to 1,955' and steel surface casing will be run and cemented to surface to protect groundwater.

Porous/permeable soils: No, sandy silty clay soils.

Class I stream drainage: No, Class I stream drainages.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☒ Off-site disposal of solids/liquids (in approved facility)

☐ Other: \_\_\_\_\_

Comments: 1,955' of 13.5" surface casing hole will be drilled with freshwater, 9 5/8" steel casing will be run to 1,955' and cemented back to surface, to protect freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and operational BOP equipment to prevent problems.

## Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No stream crossings anticipated.

High erosion potential: No, location will require a moderate cut of up to 13.3' and moderate fill of up to 18.2', required.

Loss of soil productivity: No, location to be restored after drilling, if nonproductive. If productive, unused portion of this drillsite will be reclaimed.

Unusually large wellsite: A very large well site 832'X580' for 5 wells. The Mary Wilson 2759 14-15 6B, Brewer 2759 14-15 6B, Mary Wilson 2759 14-15 7B, Brewer 2759 14-15 5B, and the Brewer 2759 14-15 7BX.

Damage to improvements: Slight surface use appears to be grassland.

Conflict with existing land use/values: Slight

Mitigation

- ☐ Avoid improvements (topographic tolerance)
- ☐ Exception location requested
- ☒ Stockpile topsoil
- ☐ Stream Crossing Permit (other agency review)
- ☒ Reclaim unused part of wellsite if productive
- ☐ Special construction methods to enhance reclamation
- ☐ Other

Comments: Access will be over an existing county road and existing well access road. New access road will be built into this location, about 632' into this location from the existing well access road. Oil based invert drilling fluids will be recycled. Completion fluids will hauled to a commercial Class II disposal. Cuttings and solids will be buried/solidified on site in the lined reserve pit. The pit will be allowed to dry and the pit backfilled. No concerns.

## Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: No residence within a mile from this location. The town of Bainville, MT is about 7.2 miles to the northwest from this location.

Possibility of H2S: Yes, slight.

Size of rig/length of drilling time: Triple drilling rig 30 to 40 days drilling time.

Mitigation:

- ☒ Proper BOP equipment
- ☐ Topographic sound barriers
- ☐ H2S contingency and/or evacuation plan
- ☐ Special equipment/procedures requirements
- ☐ Other: \_\_\_\_\_

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

## Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon, Interior Lease Tern, Whooping Crane and Piping Plover. Candidate species is the Sprague's Pipit. NH tracker website indicates fourteen (14) species of concern. They are the Great Blue Heron, Piping Plover, Bobolink and the Whooping Crane, Least Tern, Northern Redbelly Dace, Blue Sucker, Iowa Darter, Shortnose Gar, Sturgeon Chub, Sicklefin Chub, Paddlefish, Sauger, and Pallid Sturgeon.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: \_\_\_\_\_

Comments: Private surface grassland. No concerns.

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### **Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites: None identified.

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: \_\_\_\_\_

Comments: Private surface grassland. No concerns.

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### **Social/Economic**

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: Wildcat well. No concerns

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### **Remarks or Special Concerns for this site**

An exploratory single lateral horizontal Three Forks Formation test, 20,461'MD/10,554'TVD.

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### **Summary: Evaluation of Impacts and Cumulative effects**

No long term impacts expected, some short term impacts will occur, but can be mitigated.

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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/John Gizicki

(title:) Compliance Specialist

Date: October 20, 2014

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

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(Name and Agency)

Roosevelt County water wells

(subject discussed)

October 20, 2014

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA  
COUNTIES, Roosevelt County, Montana

(subject discussed)

October 20, 2014

Montana Natural Heritage Program Website

(Name and Agency)

Heritage State Rank= S1, S2, S3, Location T27N R59E

(subject discussed)

October 20, 2014

(date)

Montana Cadastral Website

(Name and Agency)

Surface Ownership and surface use Section 15 T27N R59E

(subject discussed)

October 20, 2014

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_